

Title (en)

Self accelerating and replenishing non-formaldehyde immersion coating method and composition.

Title (de)

Sich selbstbeschleunigendes und sich selbst auffrischendes Verfahren zur Tauchbeschichtung ohne Formaldehyd, sowie die entsprechende Zusammensetzung.

Title (fr)

Bain de revêtement par immersion sans formaldéhyde, auto-accélérant et auto-rajeunissant, méthode et composition.

Publication

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Application

EP 94104003 A 19940315

Priority

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Abstract (en)

A process for applying a metal coating to a nonconductive substrate without an electroless coating is disclosed. The process includes the step of: a. contacting said substrate with an activator comprising a noble metal/Group IVA metal sol to obtain a treated substrate; b. contacting said treated substrate with a self accelerating and replenishing immersion metal composition comprising a solution of: (i) a soluble metal salt whose metal is more noble than said Group IVA metal; (ii) a Group I A metal hydroxide; (iii) a complexing agent comprising an organic material having a cumulative formation constant log K of from about 0.73 to about 21.95 for an ion of the metal of said metal salt. The Group IVA metal is employed in a stoichiometric excess compared to the noble metal, the excess Group IVA metal being in its lowest oxidation state. Self accelerating and replenishing non-formaldehyde immersion metal compositions are also disclosed. The composition is used in a two step process to electrolytically coat a nonconductive substrate. In the first step the conductivity of the substrate is increased by applying the composition to it. In the second step, the substrate treated with the composition is electrolytically coated with a metal.

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